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10/563,227	03/03/2006	Bernard Charlot	Q92544	1410

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EXAMINER	
NOLAN, PETER D	

ART UNIT	PAPER NUMBER
4155	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,227	CHARLOT ET AL.	
	Examiner	Art Unit	
	Peter D. Nolan	4155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 03 January 2006.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 03 January 2006 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 1/3/2006.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been placed of record in the file.

Information Disclosure Statement

1. The information disclosure statement filed 1/3/06 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because no copies of the non-patent literature documents have been submitted. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

1. The disclosure is objected to because of the following informalities:

2. On page 6, line 26, the phrase "users U1 to UK" should be corrected to "users U01 to U0K".

3. On page 7, line 17, the phrase "computer 2" should be changed to "computer 20".

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 4, the phrase "said information data coming from at least one user" lacks antecedent basis and is unclear. Claim 4 appears to be dependent on claim 3 and should be corrected. The rejection of claim 4 under 35 USC 103 has been made under the assumption that it is dependent on claim 3.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 5-8, 14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins (US 2002/0198657 A1) in view of Walter et. al (T. Walker, C. Kee, Y.C. Chao, Y.J. Tsai, U. Peled, J. Ceva, A. K. Barrows, E. Abbott, D. Powell, P. Enge, and B. Parkinson, "Flight Trials of the Wide-Area Augmentation System (WAAS)," Proceedings of the Annual Meeting of the Satellite Division of the Institute of Navigation (ION GPS-94), 1994.) and Lo et. al (S.C. Lo, D. Akos, S. Houck, P. L. Normark, P. Enge, "WAAS Performance in the 2001 Alaska Flight Trials of the High Speed Loran Data Channel," Presented at the IEEE Position Location and Navigation Symposium, Palm Springs, CA, 2002).

3. Regarding claim 1, Robbins teaches a data server (see Robbins figure 1, Distribution System 110), used in a system for supplying complementary data, called augmentation data, for satellite navigation signals, called user signals (see figure 1, system 100. See also paragraph 48 where system 100 is described as providing differential correction signals), said system including at least one computer for determining said augmentation data (see figure 1, Network Processor and paragraphs 51, 52 where Network Processor processes data collected from reference stations to produce the network correction stream), which is determined from data transmitted by at least one receiver station receiving navigation information sent by at least one satellite (see figure 1, reference stations RS1...RSN receiving navigation system from satellites SV1...SVN), said server being characterized in that it has: a first input for receiving said augmentation data transmitted by said computer (see figure 1, where Distribution

System receives the network correction stream from Network Processor), a first output for sending said augmentation data to at least one user (see figure 1, where Distribution System transmits network correction stream to mobile equipment 115.

4. However, Robbins does not teach a second output for retransmitting said augmentation data to said computer with a predetermined time-delay relative to reception at said first input.

5. Walter teaches where the augmentation data that is transmitted to the user is used in a feedback loop to verify the augmentation data (see Walter page 2, column 2 describing an experimental Wide Area Augmentation System, WAAS, testbed that includes reference stations that provide data to a WAAS master station, WMS, that calculates a correction message that is packed into a WAAS message and sent to users using a UHF radio. See also page 7, column 1 where the differential corrections derived from the remote stations are put into a WAAS format and then “unpacked” and applied to a reference station co-located with the master station to monitor the accuracy of the broadcast corrections in real time). Although the master station is described as one device, it both computes the reference message and acts as a server by sending it over a phone line to the UHF radio. Therefore, the feedback loop used in Walter is equivalent to the retransmission of the augmentation data as claimed in claim 1.

6. It would be obvious to one skilled in the art to add the feedback loop taught in Walter to the data server and computer taught in Robbins because monitoring the accuracy of an augmentation signal ensures that it is useful to end users.

7. However, Walter does not teach where the augmentation data is retransmitted from the data server to the computer after a pre-determined time delay relative to the reception at the first input.

8. Lo teaches where differences in the latency of a terrestrial augmentation signal and the latency of a space based augmentation signal can result in differences in the calculated vertical protection level (VPL) between the two systems (see Lo figure 5 showing the VPL using space based WAAS signals and figure 6 showing the VPL using a terrestrial WAAS signal that contains additional latency).

9. It would be obvious to one skilled in the art to add a pre-determined time delay to the augmentation signal feedback loop taught by Robbins, as modified by Walter, because this would result in similar calculations of the VPL between a space based augmentation system and a terrestrial based augmentation system.

10. Regarding claim 2, Robbins, as modified by Walter and Lo in claim 1, teaches a server in an augmentation system that can retransmit at least part of the augmentation data to the computer at the same time as sending said augmentation data to a user via said first output (see the rejection of claim 1 above regarding the feedback loop. See also Walter page 7, column 1 where the accuracy of the broadcast corrections can be monitored in real time).

11. Regarding claim 5, Robbins, as modified by Walter and Lo in claim 1, teaches where the server is assigned an available geostationary satellite identification number (Robbin teaches a terrestrial testbed wherein WAAS messages are transmitted to an aircraft over a VHF link. It is well known in the art that Pseudo Random Noise, i.e. PRN,

numbers are used in satellite broadcasts to identify the satellite. It would be obvious to assign a PRN number representing a satellite to the server so that a user may receive the augmentation signal and determine that it is a satellite based augmentation system, SBAS, type message. Not assigning a PRN number to the server, and thus the augmentation signal, would decrease interoperability with current SBAS messages).

12. Regarding claim 6, Robbins, as modified by Walter and Lo in claim 1, teaches where the server is assigned a virtual receiver station number (see Walter page 7, column 1 where it is taught that a passive reference station was co-located with the WMS, but was not part of the 3 reference station network described on page 2, column 2. This reference station is part of the feedback loop and the measurements from the co-located station were used to check the accuracy of the broadcast corrections).

13. Regarding claim 7, Robbins, as modified by Walter and Lo in claim 1, teaches where the said augmentation data is determined from data transmitted by a plurality of receiver stations, the server having a third input for receiving data transmitted by one of said receiver stations (see Walter page 7, column 1 where it is taught that a reference station was co-located with the WMS and the measurements from the station were used to check the accuracy of the broadcast corrections).

14. Regarding claim 8, Robbins teaches a system for supplying complementary data, called augmentation data, for satellite navigation signals, called user signals (see figure 1, system 100. See also paragraph 48 where system 100 is described as providing differential correction signals), said system including at least one computer for determining said augmentation data (see figure 1, Network Processor and paragraphs

51, 52 where Network Processor processes data collected from reference stations to produce the network correction stream), which is determined from data transmitted by at least one receiver station receiving navigation information sent by at least one satellite (see figure 1, receiver stations RS1…RSN receiving navigation data from satellites SV1...SVN), said system including at least one data server that has a first input for receiving augmentation data transmitted by the computer (see figure 1, where Distribution System receives the network correction stream from Network Processor), and a first output for sending the augmentation data to at least one user (see figure 1, where Distribution System transmits network correction stream to mobile equipment 115).

15. However, Robbins does not teach where the server includes a second output for retransmitting said augmentation data to said computer with a predetermined time-delay relative to reception at said first input.

16. Walter teaches where the augmentation data that is transmitted to the user is used in a feedback loop to verify the augmentation data (see Walter page 2, column 2 describing an experimental Wide Area Augmentation System, WAAS, testbed that includes reference stations that provide data to a WAAS master station, WMS, that calculates a correction message that is packed into a WAAS message and sent to users using a UHF radio. See also page 7, column 1 where the differential corrections derived from the remote stations are put into a WAAS format and then "unpacked" and applied to a reference station co-located with the master station to monitor the accuracy of the broadcast corrections in real time). Although the master station is described as

one device, it both computes the reference message and acts as a server by sending it over a phone line to the UHF radio. Therefore, the feedback loop used in Walter is equivalent to the retransmission of the augmentation data as claimed in claim 1.

17. It would be obvious to one skilled in the art to add the feedback loop taught in Walter to the data server and computer taught in Robbins because monitoring the accuracy of an augmentation signal ensures that it is useful to end users.

18. However, Walter does not teach where the augmentation data is retransmitted from the data server to the computer after a pre-determined time delay relative to the reception at the first input.

19. Lo teaches where differences in the latency of a terrestrial augmentation signal and the latency of a space based augmentation signal can result in differences in the calculated vertical protection level (VPL) between the two systems (see Lo figure 5 showing the VPL using space based WAAS signals and figure 6 showing the VPL using a terrestrial WAAS signal that contains additional latency).

20. Regarding claim 14, Robbins, as modified by Walters and Lo in claim 8, teaches where the augmentation system includes broadcasting means connected to said first output of said server to broadcast said augmentation data to the users (see Robbin figure 1, Distribution System. See also paragraph 58 where the distribution system comprises delivery media for real-time distribution of DGPS data to mobile users).

21. Claims 3, 4, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins (US 2002/0198657 A1) in view of Walter et. al (T. Walker, C. Kee, Y.C. Chao, Y.J. Tsai, U. Peled, J. Ceva, A. K. Barrows, E. Abbott, D. Powell, P. Enge, and B.

Parkinson, "Flight Trials of the Wide-Area Augmentation System (WAAS)," Proceedings of the Annual Meeting of the Satellite Division of the Institute of Navigation (ION GPS-94), 1994.) and Lo et. al (S.C. Lo, D. Akos, S. Houck, P. L. Normark, P. Enge, "WAAS Performance in the 2001 Alaska Flight Trials of the High Speed Loran Data Channel," Presented at the IEEE Position Location and Navigation Symposium, Palm Springs, CA, 2002) and further in view of Eschenbach (US 6529830 B1).

22. Regarding claim 3, Robbins, as modified by Walter and Lo in claim 1, does not teach where the server includes a second input for receiving information data coming from at least one user.

23. Eschenbach teaches where a server for providing augmentation data includes an input for receiving information data coming from at least one user (see Eschenbach figure 9, system 900. See also column 16, lines 59-67 and column 17, lines 1-14 where it is taught that a user can request pseudo range corrections for a given location from a server).

24. It would be obvious to one skilled in the art to modify the server taught in Robbins, as modified by Walter and Lo in claim 1, to enable it to input data from a user in order to calculate corrections for a given location as taught in Eschenbach because it would allow measurement data to be collected and used to provide augmentation corrections over a wide area (see Eschenbach column 17, lines 11-14).

25. Regarding claim 4, Robbins, as modified by Walter and Lo in claim 1, and further modified by Eschenbach in claim 3, teaches where the server includes means for

particularizing said augmentation data sent via said first output as a function of said information data coming from at least one user (see the rejection of claim 3 above).

26. Regarding claim 16, Robbins, as modified by Walters and Lo in claim 8, teaches an augmentation system that includes routing and broadcasting means, said augmentation data being determined from data transmitted by a plurality of receiver stations and then routed and broadcast to said computer by said routing and broadcasting means (see Robbins figure 1, reference stations RS1...RSN, Data Collection Hub, and Network Processor. See also paragraph 50 where a reference station may stream output over protocol such as UDP/IP and the connection between a reference station and the Data Collection Hub may be any suitable transport media. See also paragraphs 51, 52 where the Network Processor processes the composite data stream produced by the DCH from the reference data broadcast by the reference stations).

27. However, while Robbins, as modified by Walters and Lo in claim 8, teaches where the augmentation data is retransmitted by the server to the computer, it does not teach where said augmentation data retransmitted by said server is routed and broadcast to said computer by said routing and broadcasting means because the server in Walter is integrated into the computer.

28. Eschenbach teaches where an augmentation server is not integrated in the central computer (see Eschenbach figure 8, central processor 800 and personal computer 860. See also column 15 lines 35-52 where central processor receives and

processes data from several reference stations, transmits it to personal computer 860 through the internet which then transmits the correction information to local recipients).

29. It would be obvious to one skilled in the art to separate the server in Walter from the computer as taught in Eschenbach because the local server can further process the information using local corrections (see Eschenbach column 15, lines 44-46). If the server were separate from the computer, it would further be obvious that to complete the feedback loop in Walter, the data would have to be retransmitted back over the internet. Therefore the retransmitted augmentation data would be carried over the same routing and broadcasting means used in Robbins to transmit the data received by the reference stations.

30. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins (US 2002/0198657 A1) in view of Walter et. al (T. Walker, C. Kee, Y.C. Chao, Y.J. Tsai, U. Peled, J. Ceva, A. K. Barrows, E. Abbott, D. Powell, P. Enge, and B. Parkinson, “Flight Trials of the Wide-Area Augmentation System (WAAS),” Proceedings of the Annual Meeting of the Satellite Division of the Institute of Navigation (ION GPS-94), 1994.) and Lo et. al (S.C. Lo, D. Akos, S. Houck, P. L. Normark, P. Enge, “WAAS Performance in the 2001 Alaska Flight Trials of the High Speed Loran Data Channel,” Presented at the IEEE Position Location and Navigation Symposium, Palm Springs, CA, 2002) and further in view of applicant’s admitted prior art and Ballard (US 6078960).

31. Regarding claim 9, Robbins, as modified by Walter and Lo in claim 8, teaches where the data server retransmits the augmentation data to a computer with a

predetermined time-delay relative to the reception of said augmentation data (see rejection of claim 8).

32. However, Robbins, as modified by Walter and Lo in claim 8, does not teach where an augmentation system includes a plurality of computers for determining the augmentation data, the augmentation data server including means for selecting a computer from the plurality of computers, and where the second output of the server retransmits the augmentation data received from said selected computer to said plurality of computers.

33. As admitted in applicant's discussion of the prior art, EGNOS uses multiple Central Process Facility computers (specification page 1, lines 27-32) for redundancy.

34. It would be obvious to one skilled in the art to use multiple computers to calculate augmentation data, as taught by applicant's description of the existing EGNOS technology, in the augmentation system taught by Robbins, as modified by Walter and Lo, because multiple computers would increase overall system reliability in the event of equipment failure.

35. Ballard teaches a client server network where the client in a selects a server (see Ballard figure 6, client side load balancing. See further column 6, lines 31-65 where a client computer requests data over the client server network, selecting which server to access based on a load balance list resident on the client computer). Furthermore, Ballard teaches where the client computer can upload data to the selected server (see column 7, lines 58-64). Replication of data between databases on different servers is well known in the art, therefore data uploaded to one server in Ballard could be

reproduced between more than one server (see Ballard column 1, lines 51-53 where it is taught that the same data is available from each server).

36. It would be obvious to one skilled in the art to include the load balancing scheme, as taught in Ballard, to the augmentation system taught in Robbins, as modified by Walter and Lo, containing multiple central processing computers such as the EGNOS system in applicant's prior art, because client side load balancing does not suffer from a single point of failure that can cripple an entire delivery system (see Ballard column 2, lines 66-67 and column 3, lines 1-2).

37. Regarding claim 10, Robbins, as modified by Walters and Lo in claim 8 and further modified by applicant's admitted prior art and Ballard in claim 9, teaches where the augmentation data retransmitted to said plurality of computers includes an identifier of said selected computer (see Ballard column 1, lines 46-50 where each client computer has a load balance list, enumerating respective, varying addresses of multiple server computers. See also column 7, lines 58-64 where only uplink servers identified in the load balance list are used to establish a connection with the uplink server).

38. Regarding claim 11, Robbins, as modified by Walters and Lo in claim 8 and further modified by applicant's admitted prior art and Ballard in claim 8, teaches where the selection is repeated cyclically on each reception of said augmentation data by said server (see Ballard figure 6, where if an attempt to connect to a server is unsuccessful, the client selects another server).

39. Claims 12, 13, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins (US 2002/0198657 A1) in view of Walter et. al (T. Walker, C. Kee, Y.C.

Chao, Y.J. Tsai, U. Peled, J. Ceva, A. K. Barrows, E. Abbott, D. Powell, P. Enge, and B. Parkinson, “Flight Trials of the Wide-Area Augmentation System (WAAS),” Proceedings of the Annual Meeting of the Satellite Division of the Institute of Navigation (ION GPS-94), 1994.) and Lo et. al (S.C. Lo, D. Akos, S. Houck, P. L. Normark, P. Enge, “WAAS Performance in the 2001 Alaska Flight Trials of the High Speed Loran Data Channel,” Presented at the IEEE Position Location and Navigation Symposium, Palm Springs, CA, 2002) and further in view of Ballard (US 6078960).

40. Regarding claim 12, Robbins, as modified by Walters and Lo in claim 8, does not teach where the system includes at least one active first augmentation data server and one redundant second augmentation data server, said computer transmitting said augmentation data to said first input of said active server, and not transmitting said augmentation data to said first input of said redundant server, and said computer including means for inverting the roles of said first and second servers, said second server becoming the active server and said first server becoming the redundant server

41. Ballard teaches where a client server system may contain more than one server (see Ballard column 1, lines 14-24 where it is shown that it is common to use multiple servers for load balancing) and where the client transmits data to an active server and not to the redundant server (see Ballard column 1, lines 46-50 where each client computer has a load balance list, enumerating respective, varying addresses of multiple server computers. See also column 7, lines 58-64 where only uplink servers identified in the load balance list are used to establish a connection with the uplink server) and where the client can switch the active and redundant servers (see Ballard figure 6,

where if an attempt to connect to a server is unsuccessful, the client selects another server).

42. It would be obvious to one skilled in the art for the augmentation system taught in Robbins, as modified by Walters and Lo in claim 8, to implement a client server arrangement as taught by Ballard because multiple servers are able to load balance requests from clients, thus allowing response time to be maintained at a desirable speed (see Ballard column 1, lines 22-24)

43. Regarding claim 13, Robbins, as modified by Walters and Lo in claim 8 and further modified by Ballard in claim 12 teaches where said means for reversing the roles of said first and second servers are commanded cyclically on each sending of said augmentation data (see rejection of claim 11 above).

44. Regarding claim 17, Robbins, as modified by Walters and Lo in claim 8, does not teach where an augmentation system includes a plurality of augmentation data servers.

45. However, Ballard teaches where a client server system may contain a plurality of data servers (see Ballard column 1, lines 14-24 where it is shown that it is common to use multiple servers for load balancing).

46. It would be obvious to one skilled in the art for the augmentation system taught in Robbins, as modified by Walters and Lo in claim 8, to include multiple augmentation data servers because multiple servers are able to load balance requests from clients, thus allowing response time to be maintained at a desirable speed (see Ballard column 1, lines 22-24).

47. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins (US 2002/0198657 A1) in view of Walter et. al (T. Walker, C. Kee, Y.C. Chao, Y.J. Tsai, U. Peled, J. Ceva, A. K. Barrows, E. Abbott, D. Powell, P. Enge, and B. Parkinson, “Flight Trials of the Wide-Area Augmentation System (WAAS),” Proceedings of the Annual Meeting of the Satellite Division of the Institute of Navigation (ION GPS-94), 1994.) and Lo et. al (S.C. Lo, D. Akos, S. Houck, P. L. Normark, P. Enge, “WAAS Performance in the 2001 Alaska Flight Trials of the High Speed Loran Data Channel,” Presented at the IEEE Position Location and Navigation Symposium, Palm Springs, CA, 2002) and further in view of Toran-Marti et. al (F. Toran-Marti, J. Ventura-Traveset, J. C. de Mateo, “Satellite Navigation & the Internet,” Dr. Dobb’s Journal, Mar., pp. 17-26, 2002).

48. Regarding claim 15, Robbins, as modified by Walters and Lo in claim 8, does not teach where said broadcasting means consist of the Internet.

49. Toran-Marti teaches a system for providing augmentation data where a server broadcasts the augmentation data using the internet (see Marti figure 2 showing the Signal-In-Space over the Internet, SISNET, architecture which uses a server to broadcast EGNOS augmentation messages over the internet).

50. It would be obvious to one skilled in the art to broadcast the augmentation messages generated in Robbins over the internet as taught in Marti because the internet is an existing worldwide high speed network that uses standard transmission protocols and would therefore provide greater coverage than other networks such as wireless broadcast networks or dedicated terrestrial networks.

Conclusion

Any inquiry concerning this or any earlier communication from the examiner should be directed to Examiner Peter Nolan, whose telephone number is 571-270-7016. The examiner can normally be reached Monday-Friday from 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen, can be reached at 571-272-6967 or 571-270-1202. The fax number for the organization to which this application or proceeding is assigned is 571-274-3713.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D Nolan/

Examiner, Art Unit 4155

12 September 2008

/Thu Nguyen/
Supervisory Patent Examiner, Art Unit 4155